REFERENCES 85

[121] E. Johnson, D. Thien, Y. Alhessi, S. Narayan, F. Brown, S. Lerner, T. McMullen, S. Savage, and D. Stefan, ", : SFI safety for native-compiled Wasm," Network and Distributed Systems Security (NDSS) Symposium, 2021.

- [122] F. Cohen, "Computer Viruses," in *Proceedings of the 7th DoD/NBS Computer Security Conference 1984*, pp. 240–263, 1986.
- [123] R. L. Castro, C. Schmitt, and G. D. Rodosek, "ARMED: How Automatic Malware Modifications Can Evade Static Detection?," in 2019 5th International Conference on Information Management (ICIM), pp. 20–27, 2019.
- [124] R. L. Castro, C. Schmitt, and G. Dreo, "AIMED: Evolving Malware with Genetic Programming to Evade Detection," in 18th IEEE International Conference On Trust, Security And Privacy In Computing And Communications / 13th IEEE International Conference On Big Data Science And Engineering, TrustCom/BigDataSE 2019, Rotorua, New Zealand, August 5-8, 2019, pp. 240-247, IEEE, 2019.
- [125] H. Aghakhani, F. Gritti, F. Mecca, M. Lindorfer, S. Ortolani, D. Balzarotti, G. Vigna, and C. Kruegel, "When Malware is Packin' Heat; Limits of Machine Learning Classifiers Based on Static Analysis Features," in 27th Annual Network and Distributed System Security Symposium, NDSS 2020, San Diego, California, USA, February 23-26, 2020, The Internet Society, 2020.
- [126] M. W. J. Chua and V. Balachandran, "Effectiveness of Android Obfuscation on Evading Anti-malware," in *Proceedings of the Eighth ACM Conference on Data and Application Security and Privacy, CODASPY*, pp. 143–145, 2018.
- [127] P. Dasgupta and Z. Osman, "A Comparison of State-of-the-art Techniques for Generating Adversarial Malware Binaries," *CoRR*, vol. abs/2111.11487, 2021.
- [128] G. Lu and S. K. Debray, "Weaknesses in Defenses against Web-borne Malware (Short Paper)," in Proceedings of Detection of Intrusions and Malware, and Vulnerability Assessment 10th International Conference, DIMVA 2013, vol. 7967, pp. 139–149, Springer, 2013.
- [129] M. Payer, "Embracing the New Threat: Towards Automatically Selfdiversifying Malware," in *Proceedings of The Symposium on Security for Asia* Network, pp. 1–5, 2014.
- [130] N. Loose, F. Mächtle, C. Pott, V. Bezsmertnyi, and T. Eisenbarth, "Madvex: Instrumentation-based Adversarial Attacks on Machine Learning Malware Detection," in *Detection of Intrusions and Malware, and Vulnerability Assessment 20th International Conference, DIMVA 2023*, vol. 13959 of Lecture Notes in Computer Science, pp. 69–88, 2023.

86 REFERENCES

[131] R. Sasnauskas, Y. Chen, P. Collingbourne, J. Ketema, J. Taneja, and J. Regehr, "Souper: A Synthesizing Superoptimizer," CoRR, vol. abs/1711.04422, 2017.

- [132] B. G. Ryder, "Constructing the Call Graph of a Program," *IEEE Transactions on Software Engineering*, no. 3, pp. 216–226, 1979.
- [133] S. Narayan, C. Disselkoen, D. Moghimi, S. Cauligi, E. Johnson, Z. Gang, A. Vahldiek-Oberwagner, R. Sahita, H. Shacham, D. M. Tullsen, and D. Stefan, "Swivel: Hardening WebAssembly against Spectre," in 30th USENIX Security Symposium, USENIX Security 2021, August 11-13, 2021, pp. 1433-1450, 2021.
- [134] E. Johnson, D. Thien, Y. Alhessi, S. Narayan, F. Brown, S. Lerner, T. McMullen, S. Savage, and D. Stefan, "SFI Safety for Native-compiled Wasm," NDSS. Internet Society, 2021.
- [135] M. Willsey, C. Nandi, Y. R. Wang, O. Flatt, Z. Tatlock, and P. Panchekha, "Egg: Fast and Extensible Equality Saturation," *Proc. ACM Program. Lang.*, vol. 5, no. POPL, pp. 1–29, 2021.
- [136] "Stop a wasm compiler bug before it becomes a problem | fastly." https://www.fastly.com/blog/defense-in-depth-stopping-a-wasm-compiler-bug-before-it-became-a-problem, 2021.
- [137] D. Cao, R. Kunkel, C. Nandi, M. Willsey, Z. Tatlock, and N. Polikarpova, "babble: Learning Better Abstractions with E-Graphs and Anti-unification," Proc. ACM Program. Lang., vol. 7, no. POPL, pp. 396–424, 2023.
- [138] R. Tate, M. Stepp, Z. Tatlock, and S. Lerner, "Equality Saturation: A New Approach to Optimization," in *Proceedings of the 36th ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, POPL*, pp. 264–276, 2009.
- [139] T. D. Morgan and J. W. Morgan, "Web Timing Attacks Made Practical," Black Hat, 2015.
- [140] T. Schnitzler, K. Kohls, E. Bitsikas, and C. Pöpper, "Hope of Delivery: Extracting User Locations From Mobile Instant Messengers," in 30th Annual Network and Distributed System Security Symposium, NDSS 2023, San Diego, California, USA, February 27 March 3, 2023, The Internet Society, 2023.
- [141] Mozilla, "Protections Against Fingerprinting and Cryptocurrency Mining Available in Firefox Nightly and Beta," 2019.
- [142] F. Cohen, "Computer Viruses: Theory and Experiments," *Comput. Secur.*, vol. 6, no. 1, pp. 22–35, 1987.